

**REMARKS**

Applicant has carefully reviewed and considered the Office Action mailed on June 7, 2007, and the reference cited therewith.

Claims 1, 4-6, 9-10, 12, 14-15, 19, 21-22, and 24-25 are amended, claims 2-3, 7, 11, 13, 18, 20, 23, and 26-29 are canceled, and claims 30-36 are added; as a result, claims 1, 4-6, 8-10, 12, 14-17, 19, 21-22, 24-25, and 30-36 are now pending in this Application, of which claims 1, 12, 17, 19, and 36 are independent.

Claim 1 has been amended to recite that the first value, second set of values, third value, and fourth set of values are hash values. These amendments find support, for example, on page 20, line 3, to page 21, line 2 of the specification. Dependent claims 4, 5, 9, and 10 have been amended to conform to this amendment.

Claim 6 has been amended to recite “forwarding the object to an output component” instead of “processing the object”. This amendment finds support, for example, on page 21, lines 26-27 of the specification.

Claim 12 has been amended to change “first value” and “second value” to “first hash value” and “second hash value”, respectively. These amendments find support, for example, on page 23, line 30, to page 24, line 2, of the specification. Dependent claims 14 and 16 have been amended to conform to this amendment

Claim 19 has been amended to change “first value” and “second set of values” to “first hash value” and “second set of hash values”, respectively. These amendments find support, for example, on page 20, line 3, to page 21, line 2 of the specification. Dependent claims 21, 22, 24, and 25 have been similarly amended.

Claim 30 has been added, which depends on claim 1 and recites that the device which previously scans the objects associated with the second and fourth sets of values is the same device which receives the object. Support for this claim is found, for example, on page 24, line 28, to page 25, line 1.

Claim 31 has been added, which depends on claim 1 and recites that the method is performed by a firewall. Support for this claim may be found, for example, in original claim 11.

Claim 32 has been added, which depends on claim 1 and recites that the method is performed by a router. Support for this claim may be found, for example, in original claim 11.

Claim 33 has been added, which depends on claim 1 and recites “determining whether the object is compressed; and if the object is compressed, decompressing the object.” Support for this claim may be found, for example, on page 19, lines 6-12 of the specification.

Claim 34 has been added, which depends on claim 17 and recites that the system includes a firewall. Support for this claim may be found, for example, in original claim 11.

Claim 35 has been added, which depends on claim 17 and recites that the system includes a router. Support for this claim may be found, for example, in original claim 11.

Independent claim 36 has been added, which recites a method. Support for this claim may be found, for example, on page 23, lines 5-27 of the specification.

## **§ 101 REJECTIONS**

Claims 17-25 and 27-29 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter on the ground that software is non-statutory subject matter. Applicant respectfully disagrees with this assertion that software is non-statutory subject matter.

Claim 17 recites: “A system for protecting a device against an exploit, comprising: a message tracker that is configured to determine whether an object has been previously scanned using a two-phase hash value technique; and a scanner component that is coupled to the message tracker and that is configured to receive an unscanned object and to determine whether the unscanned object includes an exploit.” This claim recites structural interrelationships which constitute statutory subject matter. Indeed, MPEP § 2106.01(I) provides: “a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure’s functionality to be realized, and is thus statutory.” Therefore, embodiments of claim 17 which may be implemented completely as software are statutory subject matter, and Applicant respectfully requests that the rejection of claim 17 be withdrawn.

Claims 19, 21-22, and 24-25, which depend on claim 17, recite patentable subject matter for the same reasons as claim 17, and Applicant respectfully requests that the rejections of these claims be withdrawn.

Claims 18, 20, 23, and 27-29 have been canceled, rendering the rejections of these claims moot. Accordingly, Applicant respectfully requests that the rejections of these claims be withdrawn.

## § 112 REJECTIONS

Claims 4, 5, 14, 15, 21, and 24 were rejected under 35 U.S.C. § 112, second paragraph. The rejection, which asserts that these claims are incomplete for omitting essential elements, on the ground that neither “ROHV” nor “SSHV” were conventional terms of art, and that one of ordinary skill in the art of computer science would not know how to produce these two computations or values, and which cites MPEP § 2172.01, appears to be a § 112, first paragraph rejection based on lack of enablement. “A claim which omits matter disclosed to be essential to the invention as described in the specification or in other statements of record may be rejected under 35 U.S.C. 112, first paragraph, as not enabling.” MPEP § 2172.01. Applicant respectfully submits these claims, as understood in light of the specification, do enable one of ordinary skill in the art to produce both of these recited values.

The specification, on page 20, lines 9-14, describes how to produce a rough outline hash value (ROHV): “The ROHV is typically determined based on a simple technique that only requires a simple computation. For example, the ROHV of an object may be determined from a hash value (such as an XOR) hash of the first few bytes or any portion of a file. The ROHV may also be determined using simple parameters like the object size and the like. The ROHV enables message tracker 527 to roughly distinguish one object from other objects.”

Similarly, the specification, on page 20, lines 16-20, describes how to produce a sophisticated signature hash value (SSHV): “An SSHV is typically determined based on a sophisticated hash function, such as Message Digest -5 (MD-5), Secure Hash Algorithm (SHA), Secure Hash Standard, and the like. The values may also be determined based on a public key certificate, a digital signature, a checksum function, or similar algorithmic mechanism that provides a value that distinguishes one object from other objects.”

Applicant respectfully submits that these portions of the specification satisfy 35 U.S.C. § 112, first paragraph, by enabling one of ordinary skill in the art to produce a ROHV and a SSHV. Accordingly, Applicant respectfully requests that the rejections of claims 4, 5, 14, 15, 21, and 24 be withdrawn.

Claim 6 was rejected under 35 U.S.C. § 112, second paragraph, on the ground that processing the object without scanning the object was indefinite because processing an object inherently necessitates scanning the object. Applicant respectfully submits that the amendment

to claim 6, changing “processing” to “forwarding”, obviates this rejection. Accordingly, Applicant respectfully requests that this rejection be withdrawn.

### **§ 102/103 REJECTIONS**

Claims 1-3, 6-13, 16-20, 22-23, and 25-29 were rejected under 35 U.S.C. § 102(b) as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over Chen et al., U.S. Patent No. 5,960,170. Applicant respectfully submits that the amendments made to the pending claims overcome these rejections.

Claim 1 has been amended to recite that the values are hash values. Claim 1 was rejected on the ground that the virus string A1 anticipated the first value recited in claim 1, the virus strings A1, A2, and A3 anticipated the second set of values recited in claim 1, the virus string B1 anticipated the third value, and that the virus strings B1, B2, and B3 anticipated the fourth set of values. These virus strings are portions of virus signatures. Chen, column 13, lines 27-33. Chen does not disclose or suggest determining or matching hash values, as recited in amended claim 1. Therefore, Chen does not disclose or suggest all of the elements of amended claim 1, and Applicant respectfully requests that the rejection of claim 1 be withdrawn.

Claims 4-6, 8-10, and 30-33 should be allowed at least due to their dependence on allowable claim 1. Claims 9 and 10 should also be allowed for the further reason that Chen does not disclose or suggest updating the second set or fourth set to include the third has value or third hash value, as recited in claims 9 and 10, respectively.

Claim 30 should also be allowed because Chen does not disclose or suggest “the second set of hash values and the fourth set of hash values are determined by the device based on previous scanning by the device”, as recited in claim 30. In Chen, the virus detection server 400 produces the virus strings, and the client 300 executes the virus strings on the object, as shown in FIG. 5. Claim 30, on the other hand, recites that the same device determines the sets of hash values and determines whether the hash values match the sets of hash values. Therefore, Chen does not disclose or suggest the elements recited in claim 30, and Applicant respectfully requests that claim 30 be allowed.

Claims 31 and 32 should also be allowed because Chen does not disclose or suggest a method being performed on a firewall or router, respectively.

Claim 33 should also be allowed because Chen does not disclose or suggest determining whether an object has been compressed, or decompressing the object.

Claim 12 has also been amended to recite that the values are hash values. Applicant respectfully submits that the rejection of claim 12 should be withdrawn because Chen does not disclose or suggest including or having hash values, as recited in amended claim 12. Accordingly, Applicant respectfully requests that the rejection of claim 12 be withdrawn. Applicant further requests that the rejections of claim 16 be withdrawn at least due to claim 16's dependence on allowable claim 12.

Claim 17 recites, in part, "a message tracker that is configured to determine whether an object has been previously scanned using a two-phase hash value technique". The Office Action asserts that this recitation is disclosed by FIG. 2 of Chen. However, FIG. 2 of Chen, or any part of Chen, does not disclose or suggest any hash value technique. Therefore, Chen does not disclose or suggest all the elements of claim 17, and Applicant respectfully requests that the rejection of claim 17 be withdrawn.

Applicant further requests that the rejections of claims 19, 22, and 24-25 be withdrawn at least due to their dependence on allowable claim 17.

Applicant further submits that claims 34 and 35 should be allowed due to their dependence on allowable claim 17, and because Chen does not recite a system which includes a firewall or a router, as recited in claims 34 and 35, respectively.

Applicant respectfully submits that newly added claim 36 should be allowed because Chen does not disclose a rough outline hash value or a sophisticated signature hash value, as recited in claim 36.

Claims 2-3, 7, 11, 13, 18, 20, 23, and 26-29 have been canceled, making the rejections of these claims moot. Accordingly, Applicant respectfully requests that the rejections of these claims be withdrawn.

**CONCLUSION**

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (208-286-1013) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-3521 and reference Atty Docket No: 0038-005001.

Respectfully submitted,

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208-286-1013

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